abietella. Subsequently, DHS dissected a series of both sexes but was unable to find any constant differences between these and caught specimens previously identified as *abietella*, although it was impossible to know whether, as larvae, the caught specimens were associated with *Pinus abies* or *P. sylvestris*.

It is possible that *abietella* feeds on the cone of either *P. abies* or *P. sylvestris*. However, very few *P. sylvestris* feeders are known to have *P. abies* as an alternative foodplant. Of the 26 species listed in Emmet (*loc cit*) as feeding on *P. sylvestris*, only 3 are shown as also feeding on *P. abies*. BRB obtained several pairings from the bred *Dioryctria* but was unable to persuade them to lay on fresh sprigs of *P. sylvestris* bearing green cones. Further investigation is needed, but the following suggestions are advanced for consideration:

1. Although *P. abies* has never been recorded as a foodplant for *D. abietella*, both *P. sylvestris* and *P. abies* are acceptable foodplants.
2. There is a fourth British *Dioryctria* species closely related to the *P. sylvestris* feeding *abietella* and *mutatella*. but whose foodplant is *P. abies*.
3. *D. mutatella* feeds on *P. sylvestris* and *D. abietella* feeds on *P. abies*. As *D. mutatella* was not originally considered a "good" species, the larval habits of *D. abietella* f. *mutatella*, as it was earlier known, could have been correctly observed and described, but applied incorrectly to *D. abietella* as well as *D. mutatella* when the species were split.

It would be of value to compare genitalia and specimens of any presumed *D. abietella* actually bred from *P. sylvestris*, if such specimens are held in any collections. D. H. STERLING 2 Hampton Lane, Winchester, Hants. SO22 5LF.

PHRAGMATOBIA FULIGINOSA L. (LEP.: ARCTIIDAE) A POSTSCRIPT. — I am able to add some further observations in relation to my account of certain aspects of the life history of the ruby tiger (*Ent. Rec.* **98**:129). The fine specimens in the National Collection indicating the form found in the Orkney Islands are in fact not typical. Mr. R. I. Lorimer who donated them to the collection informs me that they were bred in captivity in the South of England, and may have included F2 generation moths. In early Autumn of 1986 Mr. Lorimer kindly sent me some full fed *fuliginosa* larvae from the Orkneys; some reluctantly pupated instead of hibernating as larvae and the resulting moths were typical *borealis* Staud., perhaps slightly darker than average – quite unlike the British Museum specimens which have now been suitably relabelled. B. Kettlewell (*The Evolution of Melanism*, 1973) notes that G. Harper had informed him that *borealis* offspring from Scotland which were forced at 70°F to emerge in Winter were markedly redder, approaching the

English form; those bred by Mr. Lorimer seem to substantiate this.

I drew attention to the fact that the ruby tiger has a series of black spots upon the dorsal aspect of the abdomen, and not a stripe. The second Orcadian specimen to emerge possessed a broad black dorsal abdominal stripe! I believe this to be an uncommon form, but which can only be identified before the insect dries out after death.

Although *fuliginosa* appears to be bivoltine in Counties Cork and Kerry, J. Bradley and E. C. Pelham-Clinton (*Ent. Gaz.* **18**:115) produce evidence that it is single brooded in the Burren of Co. Clare, flying in May and June, although they do not indicate whether by day or by night.

On September 25th 1986 I found several *fuliginosa* larvae on spindle *(Euonymus europaeus)* near Swanley, Kent; they completed their growth on this. In view of the observation that many Arctiid moths tend to lay their eggs on shrubs (M. Shaw: *Ent. Rec.* **97**:31) although the larvae feed mainly upon herbaceous plants, this particular incident seems worth recording. – B. K. WEST, 36 Briar Road, Bexley, Kent.

ZOROCHROS MINIMUS (BOIS. & LAC.) (COL.: ELATERIDAE) AT THE TOPS OF MOUNTAINS. The usual place to find *Z. minimus* (=*Cryptohypnus dermestoides* Herbst) is in gravel, under small stones or mats of vegetation at the sides of streams and rivers. In Scotland, it is widespread in this habitat and often very common, especially in the highlands. On two occasions I have come across the species in a different habitat – the tops of mountains. The first of these was in July 1974, when I found a number of examples near the summit of Ben More Coigach, Wester Ross (NC095045 alt. 742m) under small stones in an area practically devoid of vegetation. The second was in July 1983, when I met with the species near the top of Quinag, West Ross (NC205280 alt. ca. 700m), again under small stones on a gravelly base. The only previous mention I have found of this species occurring at high altitude in Britain is by Steel and Woodroffe (1969, *Trans. Soc. Brit. Entom.* **18**: 91) who reported its occurrence at the roots of thyme at 634 m on Hallival on Rhum.

The finding of these specimens in an unusual habitat, together with the report of *Z. flavipes* (Aube) in Britain (Cooter, J. 1983 *Entomologist's mon. Magazine* **119**:233) made me compare my high altitude specimens carefully with specimens found at low altitudes. In doing this, I have examined in all about 150 specimens from about 20 different sites in highland and lowland Scotland and have dissected many of them. These have included a large series from the Dorback burn site from which my friend Mr. Cooter obtained his specimens of *Z. flavipes.*

All I can state at this stage is that the mountain top specimens